

Mgoduyanuka: faunal remains

by

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SYNOPSIS

Faunal remains from the Later Iron Age site of Mgoduyanuka reflect a community which was heavily dependent on herding to obtain meat. Hunting and fishing were probably regarded as forms of recreation.

INTRODUCTION

The site Mgoduyanuka is situated on the Tugela River approximately 6 km downstream from Bergville, Natal. The site dates from the seventeenth to the eighteenth century. Stratigraphic information is provided in the accompanying paper (Maggs 1982).

Although the channels and the oval feature probably predate the midden, the excavator considers that all features at Mgoduyanuka can be considered to be generally contemporaneous.

Analysis of the faunal sample was done at the Transvaal Museum according to methods and procedures suggested by Brain (1974) and Voigt (1978). The sample consisted of 3 681 specimens of which 503 were identifiable to species level or to skeletal part (Table 1).

TABLE 1
Mgoduyanuka: total bone sample
Sample size of diagnostic bone

Skeletal part	Bedrock Channels	Oval feature	Unit 1	Midden Level			Midden	Total
				1	2	3		
Bovid teeth	3	1	1	0	2	1	178	186
Bovid skeletal part	4	0	0	6	16	8	251	285
Other identified remains	0	0	0	0	0	0	32	32
Total	7	1	1	6	18	9	461	503

SPECIES PRESENT

Species were mainly identified on the teeth present in the sample. In some instances other skeletal parts were sufficiently diagnostic to allow identification to species level e.g. hippopotamus and sheep. The minimum number of individuals was determined on the basis of methods described by Voigt (1978).

At Mgoduyanuka a total of 69 individuals was identified representing 16 different species. One sheep was identified on the basis of cranial material. This individual is listed separately in the species list (Table 2), but has been included in the *Ovis/Capra* group in Table 3 where economic activities and diet are considered, bringing the actual minimum individual count down to 68 individuals.

Most of the 68 individuals present may be regarded as food animals. The rodents, small mammal and the frog are probably natural inclusions in the

TABLE 2.
Mgoduyanuka: species present and basis of identification

Species	M. Ind.	Identifying skeletal parts
<i>Hippopotamus amphibius</i> (Hippopotamus)	1	Lachrymal bone.
<i>Bos taurus</i> (cattle)	27 (7 Juveniles)	Anterior lobe of right M $\bar{3}$, light wear; right dp $\bar{4}$, medium wear; right M $\bar{2}$ light wear; left dp $\bar{2}$ medium wear; anterior lobe of erupting M $\bar{1}$; left i $\bar{4}$, light wear; left mandible with il-i $\bar{4}$, light wear; two left dp $\bar{3}$'s, heavy wear; right dp $\bar{3}$, heavy wear; four left M $\bar{2}$'s light wear; left I $\bar{1}$, light wear; newly erupted left I $\bar{1}$; right P $\bar{4}$, light wear; right P $\bar{4}$, newly erupted; left dp $\bar{4}$, heavy wear; two left M $\bar{3}$'s medium wear; left P $\bar{2}$ heavy wear; two left mandibles with P $\bar{2}$ -P $\bar{3}$, heavy wear; three left P $\bar{3}$'s heavy wear.
<i>Ovis aries</i> (sheep)	1	Right bulla tympanica; right and left premaxilla.
<i>Ovis/Capra</i> (sheep/goat)	22 (7 Juveniles)	Right I $\bar{2}$, light wear; right mandible with dp $\bar{2}$ -dp $\bar{4}$, M $\bar{1}$, M $\bar{2}$ erupting; right mandible with dp $\bar{2}$ -dp $\bar{3}$, medium wear; right mandible with dp $\bar{2}$ -dp $\bar{4}$, medium to heavy wear; left mandible with dp $\bar{3}$ -M $\bar{2}$, M $\bar{2}$ erupting; right mandible with P $\bar{3}$ -M $\bar{2}$, M $\bar{3}$ in crypt; left mandible with dp $\bar{4}$, M $\bar{1}$, M $\bar{2}$ erupting left mandible with P $\bar{3}$ -M $\bar{2}$, M $\bar{3}$ and P $\bar{3}$ erupting; two left M $\bar{3}$'s light wear; two left M $\bar{3}$'s newly erupted; left maxilla with P $\bar{4}$ -M $\bar{3}$ heavy to medium wear; five left P $\bar{4}$'s medium wear; left maxilla with P $\bar{2}$ -P $\bar{4}$ medium wear; three right M $\bar{3}$'s heavy wear.
<i>Pelea capreolus</i> (Vaal rhebuck)	3 (3 Juveniles)	Right mandible with dp $\bar{3}$ -dp $\bar{4}$, M $\bar{1}$ erupting; two left mandibles with dp $\bar{2}$ -dp $\bar{4}$ and M $\bar{1}$ fragment in the mandible.
<i>Aepyceros melampus</i> (Impala)	1	Right P $\bar{3}$, light wear.
Bov. I	5	Five radius shafts of five different individuals.
Bov. II(b)	1	Anterior lobe of right M $\bar{2}$ very light wear.
<i>Cryptomys natalensis</i> (Natal mole-rat)	1	Skull, left incisor; right upper incisor; lower incisor; two mandible fragments; scapula; left and right humerus; pelvis; femur; tibia.
<i>Rattus</i> sp. (Rat)	1	Major part of skull with teeth.
Murid sized rodent	1	Left mandible; left pelvis; left femur.
Small mammal	1	Two long bone shafts; metacarpal shaft.
Guineafowl sized bird	1	Left proximal ulna; terminal phalanx.
<i>Varanus</i> sp. (Monitor lizard)	1	Skull fragment.
Frog	1	Left and right humerus; seven limb bones.
Fish	1	Rib fragment.
Total	69	

TABLE 3

Mgoduyanuka: economic activities and meat contribution to the diet by animals on the basis of minimum number of individuals.

Economic activity and species	M. Ind.	% M. Ind. per economic activity	Meat wt. 50% of live wt. kg.	Total meat	% of meat
A—Herded					
<i>Bos taurus</i> : Adult	20	29,6	249	4 980,0	81,4
Juvenile	7	10,1	99	693,0	11,3
<i>Ovis/Capra</i> : Adult	15	22,2	16	240,0	3,9
Juvenile	7	10,1	12,8	89,6	1,5
Total domesticated	49	72,0		6 002,6	98,1
B—Hunted bovids					
<i>Pelea capreolus</i>	3	4,4	11,5	34,5	0,6
<i>Aepyceros melampus</i>	1	1,4	20,2	20,2	0,3
Bov. I	5	7,5	7,8	39,0	0,6
Bov. II	1	1,4	20,2	20,2	0,3
Total bovids hunted	10	14,7		113,9	1,8
Non-bovids					
<i>Hippopotamus amphibius</i> *	1	1,4	645,0	—	—
Snared: Guineafowl sized bird	1	1,4	0,75	0,75	0,01
Gathered: <i>Varanus</i> sp.	1	1,4	1,6	1,6	0,03
Fished	1	1,4	no estimate		
Total food animals	63	92,6		6 118,9	99,9
C—Non-contributors	5	7,4			
Total	68	100,0			

* *Hippopotamus* is excluded from the meat calculations: it has a live weight approximately 1 290,0 kg; meat weight approximately 645,0 kg.

deposits. The house rat is not indigenous to Africa, but similar finds on South African and Zambian sites have been recorded by Plug, Dippenaar & Hanisch (1979), Davis & Fagan (1962) and Fagan & Phillipson (1965).

The sample is dominated by bovids, the majority of which were domestic. The presence of Vaal rhebuck is in keeping with the terrain, as the surrounding hilly area is suitable for this buck. The hippopotamus would have been at home in the nearby Tugela River. Impala would also have occurred in the area and so its presence in the sample is not unexpected.

DIET AND ECONOMY

Economic activities pursued at Mgoduyanuka are represented in Table 3. Activities were centred on the herding of domestic animals (72,0%); hunting, snaring, gathering and fishing accounted for 20,6% of the activities, while the remaining 7,4% of the sample can be attributed to non-contributors to the diet. Hunting of bovids accounted for 14,7% of all the activities not concerned with domestic animals. Only one non-bovid animal was hunted.

Domestic animals provided the community with 98,1 % of all their meat supply, whereas hunting contributed only 1,8 %. The contributions of snaring, gathering and fishing were negligible.

Domestic bovids age classes (Table 4)

Ageing of domestic bovids is based on the conditions of wear on the teeth as described by Voigt (1978). The Mgoduyanuka sample was small, but yielded the remains of a minimum of 27 cattle and 22 sheep/goats. The *B. taurus* age classes show a uniform distribution. Animals of all ages were slaughtered. The ages for *Ovis/Capra* show a somewhat different pattern in that very young animals (Class I) were apparently not slaughtered. The other age classes are all represented, but there is a peak in age class V, indicating that preference was given to the older, mature animals.

Skeletal part preservation

Bovid postcranial remains were well represented in the identifiable portion of the sample with 285 fragments (Table 5). Eight bones showed rodent gnaw marks, 24 bones had carnivore damage, 11 were burnt, 12 showed cut marks or chopping damage, 11 showed polish and one metacarpal shaft was cut through, snapped off and polished. There was also one D-sectioned bone point with light polish present in the sample.

TABLE 4
Mgoduyanuka: domestic bovids age classes

Bos taurus

Class	Unit 1	Oval feature	Channels in bedrock	Midden incl. all levels	Total
I.....	0	0	0	1	1
II.....	0	1	1	2	4
III.....	0	0	0	3	3
IV.....	0	0	1	4	5
V.....	1	0	0	2	3
VI.....	0	0	0	3	3
VII.....	0	0	0	2	2
VIII.....	0	0	0	3	3
IX.....	0	0	0	3	3
Total	1	1	2	23	27

Ovis/Capra

Class	Unit 1	Oval feature	Channels in bedrock	Midden incl. all levels	Total
I.....	0	0	0	0	0
II.....	0	0	0	4	4
III.....	0	0	0	3	3
IV.....	0	0	1	4	5
V.....	0	0	0	7	7
VI.....	0	0	0	3	3
Total	0	0	1	21	22

TABLE 5

Mgoduyanuka: bovid skeletal parts (all units combined) ° = unfused x = Bov. II(b)

Skeletal part	Bov. I No. M. Ind.		Bov. II No. M. Ind.		Bov. III No. M. Ind.		Total	% of skeletal parts
Identifiable skull			3	1	4	2	7	2,5
Horncore					1°	1°	1	0,4
Axis vertebra					3	2	3	1,1
Scapula			8 ^(1x)	8 ^(1x)	9	4	17	6,0
Humerus	4 ^(1°)	2	5	4	3	2	12	4,2
Radius	5	5	4	4	13 ^(3°)	6	22	7,7
Ulna	1	1	4 ^(1°)	4	3	3	8	2,8
Pelvis	2	1	4	3	8 ^(2°)	4	14	4,9
Femur			2	2	17 ^(3°)	5	19	6,7
Tibia	4	4	1	1	9 ^(3°)	5	14	4,9
Metapodial	2	1	31 ^(2°)	11	24 ^(3°)	4	57	20,0
Astragalus			4	4	4	3	8	2,8
Calcaneum			3 ^(1°)	3	6	4	9	3,2
Patella					2	2	2	0,6
Sesamoid					2	1	2	0,6
Lateral malleolus . . .					3	3	3	1,1
Naviculo-cuboid . . .			1	1	4	2	5	1,8
Carpal/tarsal			3	2	18	6	21	7,4
Phalanx 1			4	1	26 ^(1°)	3	30	10,5
2			1	1	21 ^(2°)	3	22	7,7
Terminal phalanx . . .					9	2	9	3,2
Total	18 ^(1°)		78 ^(1x, 4°)		189 ^(18°)		285	

CONCLUSIONS

The people of Mgoduyanuka were cattle and sheep/goat herders. These formed the almost exclusive basis for the community's meat supply (98%). High figures for meat contribution obtained through herding have also been recorded from other Late Iron Age sites such as Mgungundlovu in Natal with *ca.* 90 % (Brown, 1979) and the central Transvaal sites of Ficus (where the third component dates to the 15th/16th century) with 84 % (Plug 1980a), Rhenosterkloof (17th/18th century) with 95 % (Plug 1980b) and the nineteenth/twentieth century site of Kekane with 99,9 % (Plug 1980a). In the northern Transvaal the fourteenth century site of Icon the meat yield from herding was 96 % (Voigt & Plug 1981). An exception is

the central Transvaal site of Rooikrans, which is contemporaneous with Rhenosterkloof, where herding yielded only 66% of the meat contribution. No explanation can as yet be given for this low figure (Plug 1980*b*).

At Mgoduyanuka the number of cattle slaughtered outnumbered caprines, as was also the case at Mgungundlovu (Brown 1979), *Ficus* and Rhenosterkloof (Plug 1980*a* and *b*).

Cattle slaughtered at Mgoduyanuka show an even age distribution. This differs from the pattern at Mgungundlovu where 79 of the 80 individuals present in the sample were adult. This exceptionally high number of adult animals is probably due to the social structure of the settlement, where new regiments were awarded their shields, for which purpose probably only adult animals were slaughtered. The evidence from the southern Highveld Iron Age sites suggests that most of the cattle slaughtered were juvenile, and 'adults were seldom kept to an advanced age' (Maggs 1975: 449). Preference for the butchering of fully mature animals was generally practised at most northern Transvaal sites (Voigt & Plug 1981) (although nowhere as pronounced as at Mgungundlovu), as well as at Wildebeestfontein in the southern Transvaal (Plug 1979), the Early Iron Age site of Ntshekane (Maggs & Michael 1976) and Mapungubwe (Voigt 1978).

Caprines were mostly slaughtered when fully mature. This was also the case at Mapungubwe (Voigt 1978) and Ntshekane (Maggs & Michael 1976). Wildebeestfontein (Plug 1979) shows an even age distribution and on the southern Highveld sites caprines were mostly slaughtered when young (Maggs 1975).

Although hunting played only a small role as a method of obtaining animal protein, at Mgoduyanuka it was apparently practised on a regular basis. Hunting may have been regarded as a form of recreation rather than an economic necessity. Evidence for hunting hippopotamus and other animals with the aid of pitfalls has been described by Hall (1977: 10) and Maggs (1975). It is possible that the hippopotamus present in the Mgoduyanuka sample was hunted in such a manner.

The Tugela River was not regularly exploited as a food source as very few remains of freshwater animals were present.

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